

Lacrimal Disorders

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Tear film provides:

- 1) smooth and transparent **refractive surface**
- 2) essential **moisture**
- 3) **oxygen** to epithelial cells
- 4) **protective proteins** (e.g. IgA, complement, lysozyme)

Health of ocular surface is entirely dependent upon *quantity & quality of tear film* (both can be altered by contact lenses!).

- normal eye has 6 µL tears with turnover 1.2 µL/min.

DACRYOSTENOSIS

- *stricture of nasolacrimal duct.*

Congenital dacryostenosis - epiphora of one eye in infant (at age > 3 wk)

Acquired dacryostenosis:

- 1) chronic lacrimal sac infection
- 2) severe or chronic conjunctivitis.
- 3) deviated septum, hypertrophic rhinitis, mucosal polyps, hypertrophied inferior turbinate, fracture of facial bones.

CLINICAL FEATURES

- prolonged blockage → dacryocystitis.
- pressure on lacrimal sac → copious mucus / pus reflux from punctum.

TREATMENT

Congenital dacryostenosis - **resolves spontaneously** by age 6 mo.

- **milking lacrimal sac** (with firm fingertip massage) + **antibiotic ointment** may speed resolution.
- if resolution is not spontaneous → **punctum should be dilated** (under brief general anesthesia) and **lacrimal drainage system probed**.

Acquired dacryostenosis - dilate punctum under local anesthetic → **isotonic saline irrigation** through nasolacrimal system with fine blunt canaliculus needle (fluorescein drop in saline makes obstruction in nose easily detectable).

- if this technique fails → **lacrimal probing** with increasing size.
- complete obstruction → **surgical opening**.

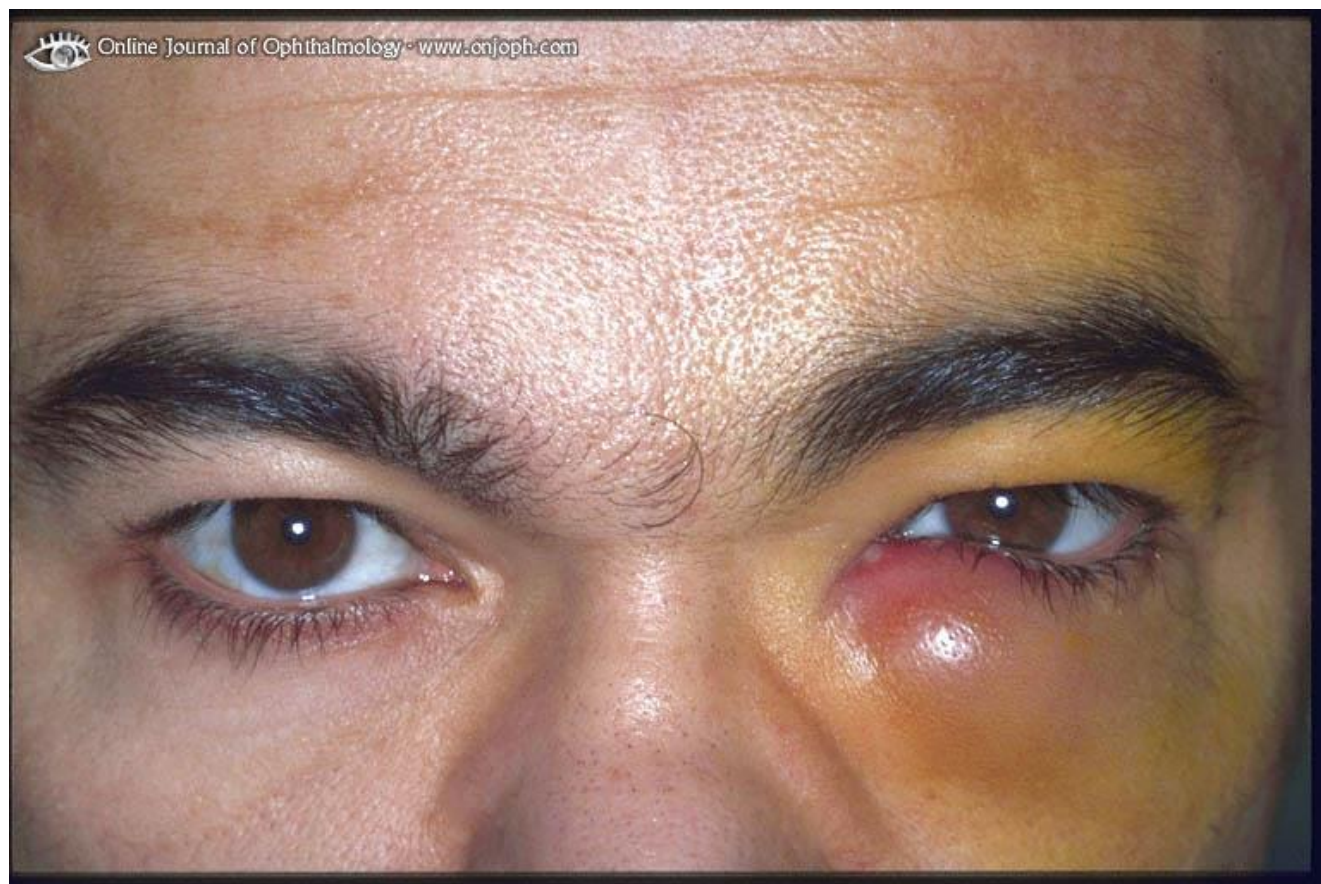
DACRYOCYSTITIS

- *infection of lacrimal sac.*

- usually **secondary to dacryostenosis**.

Acute dacryocystitis - pain, redness, edema about lacrimal sac; epiphora; conjunctivitis; blepharitis; fever; leukocytosis; abscess may form → rupture → draining fistula.

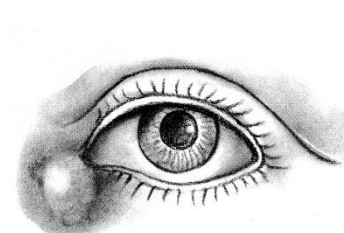
- **treatment** - frequent **hot compresses**; CEPHALEXIN / CEFAZOLIN for *severe cases*; incision and drainage for *abscess*.



Source of picture: "Online Journal of Ophthalmology" >>

Chronic dacryocystitis - slight sac swelling and tearing may be the only symptoms.

- pus may regurgitate (through punctum) when pressure is applied.
- retained secretions may form large mucocele.
- **treatment** - **nasolacrimal duct dilation** with probe and **syringing with saline**(under local anesthetic); contributory nasal or sinus abnormalities should be treated.
 if this treatment fails → nasolacrimal intubation, dacryocystorhinostomy, sac removal.

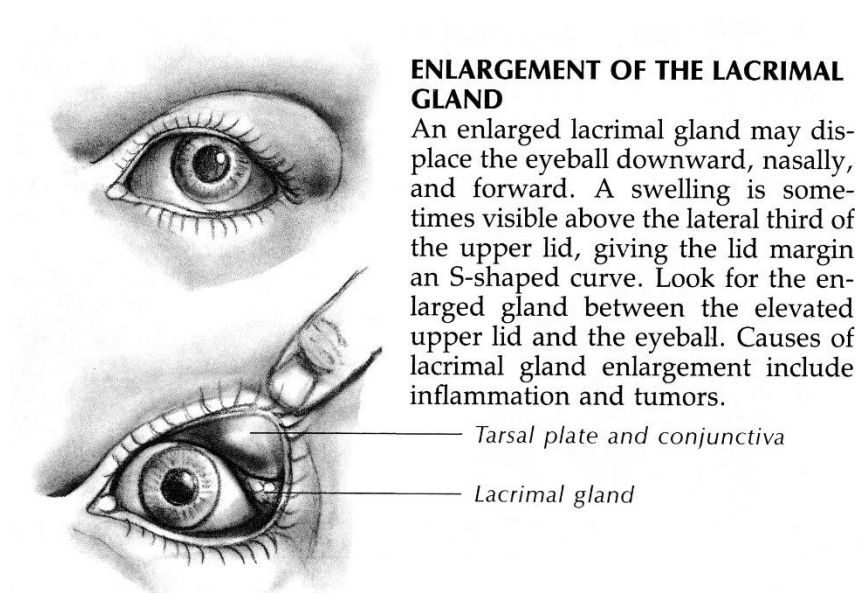


INFLAMMATION OF THE LACRIMAL SAC (DACRYOCYSTITIS)

A swelling between the lower eyelid and nose suggests inflammation of the lacrimal sac. It may be acute or chronic. An *acute* inflammation is painful, red, and tender and may have a surrounding cellulitis. *Chronic* inflammation is associated with obstruction of the nasolacrimal duct. Tearing is prominent and pressure on the sac produces regurgitation of material through the puncta of the eyelids.

DACRYOADENITIS

- pain and swelling on temporal side of upper lid (upper lid appears S-shaped), ptosis:
- etiology:
 - acute** – viruses (mumps, influenza, measles), gonococci.
 - chronic** – tumors, sarcoid, tbc.



Source of picture: "Online Journal of Ophthalmology" >>

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